

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau(43) International Publication Date
4 March 2004 (04.03.2004)

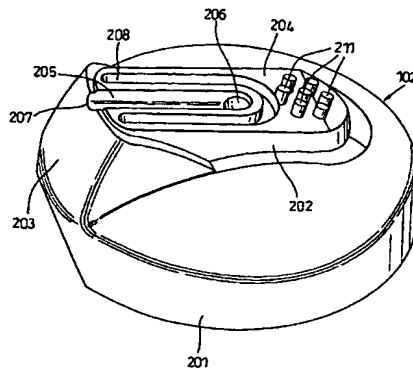
PCT

(10) International Publication Number
WO 2004/018111 A1

- (51) International Patent Classification⁷: **B05B 11/00**,
B65D 83/16
- (21) International Application Number:
PCT/GB2003/003762
- (22) International Filing Date: 22 August 2003 (22.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0219641.8 23 August 2002 (23.08.2002) GB
0226867.0 19 November 2002 (19.11.2002) GB
0303698.5 18 February 2003 (18.02.2003) GB
0305597.7 12 March 2003 (12.03.2003) GB
0308909.1 17 April 2003 (17.04.2003) GB
0310244.9 3 May 2003 (03.05.2003) GB
- (71) Applicant (for all designated States except US): **INCRO LIMITED** [GB/GB]; 35 Fairfield Rise, Wollaston, Stourbridge, West Midland DY8 3PQ (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **LAIDLER, Keith**
- [GB/GB]; 35 Fairfield Rise, Wollaston, Stourbridge, West Midlands DY8 3PQ (GB). **RODD, Timothy** [GB/GB]; Chart House, Sandy Lane, Lyndhurst, Hants SO43 7DN (GB).
- (74) Agents: **CROFT, Michael, John** et al.; Wilson Gunn Skerrett, Charles Street, 148/9 Great Charles Street, Birmingham B3 3HT (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: OUTLET DEVICE FOR A CONTAINER OR VESSEL



(57) Abstract: The present invention relates to an outlet device and nozzle arrangement adapted to be fitted to a pressurised and non-pressurised vessels or containers respectively and to permit fluid present in said vessels or containers to be dispensed under pressure. Both the outlet device and the nozzle arrangement have bodies which define an inlet, an outlet and an internal fluid flow passageway through which fluid can flow from said inlet to said outlet. In addition, the bodies of the outlet device and the nozzle arrangement of the present invention additionally comprises a resiliently deformable wall member which defines an internal surface of fluid flow passageway and which is configured such that, when fluid is caused to flow through the outlet device/nozzle arrangement under pressure, the resiliently deformable wall undergoes a resilient deformation from an initial resiliently-biased configuration in which the passageway is closed to a distended configuration whereby fluid can flow through the passageway and be dispensed through the outlet. Furthermore, the resiliently deformable wall is configured to revert to the initial resiliently biased configuration when the operation of the actuator means is ceased and thereby cause any fluid remaining in said portion of the passageway to be expelled.

WO 2004/018111 A1

WO 2004/018111 A1



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

National Application No
GB 03/03762

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B05B11/00 B65D83/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B05B B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 747 292 A (PENTEL KK) 11 December 1996 (1996-12-11) column 7, line 49 - column 10, line 1; figures 27-35	1-9, 14-17, 20-25, 30-37, 42-45, 52, 53, 58, 59
X	US 5 613 517 A (HANDLER MICHAEL D) 25 March 1997 (1997-03-25) the whole document	1-9, 14-17, 20-25, 30-37, 42-45, 52, 53, 58, 59

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

23 January 2004

Date of mailing of the international search report

29/01/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Brévier, F

INTERNATIONAL SEARCH REPORT

ational Application No

.../GB 03/03762

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2 756 899 A (OREAL) 12 June 1998 (1998-06-12) page 6, line 47 - page 7, line 7; figures -----	1,32,58, 59
A	WO 01/025116 A (KAUFMAN BRETT) 12 April 2001 (2001-04-12) page 1, line 4 - line 7 page 3, line 19 - line 25; figures -----	1,32,58, 59

INTERNATIONAL SEARCH REPORT

International Application No

/GB 03/03762

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0747292	A	11-12-1996	DE 69526072 D1	02-05-2002
			DE 69526072 T2	19-12-2002
			EP 0747292 A1	11-12-1996
			US 5868287 A	09-02-1999
			WO 9619389 A1	27-06-1996
			JP 9188349 A	22-07-1997
<hr/>				
US 5613517	A	25-03-1997	AU 3893995 A	15-05-1996
			AU 693707 B2	02-07-1998
			AU 6063696 A	12-09-1996
			CA 2179811 A1	02-05-1996
			CN 1137308 A ,B	04-12-1996
			EP 0746711 A1	11-12-1996
			JP 2859442 B2	17-02-1999
			JP 9507564 T	29-07-1997
			KR 235276 B1	15-12-1999
			TW 389815 B	11-05-2000
			WO 9612904 A1	02-05-1996
<hr/>				
FR 2756899	A	12-06-1998	FR 2756899 A1	12-06-1998
<hr/>				
WO 0125116	A	12-04-2001	WO 0125116 A1	12-04-2001
<hr/>				